NOAA SpillWeb Information Network

Spills seriously strain the normal abilities of organizations to gather, process, and distribute information. Added to the problems of supporting local multi-agency decisions with computer-based information, there are often external pressures from headquarters groups and the public for rapid access to information about the spill. Responding to these external requests for information can bring a spill information management organization to its knees.

Many organizations involved in spill response have adopted the National Interagency Incident Management System's Incident Command System (ICS) for command and control. The ICS provides an organizational structure and highly specific information flow for implementing a multi-agency disaster response. An ICS spill team can be comprised of individuals from local, state, and Federal agencies and private industry. Each of these entities is likely to use different computer hardware, networking systems, and software. Some might implement a private spill management system to help direct their response.

No two spill responses are the same; command posts are variously set up in hotel ballrooms, gyms, or Coast Guard offices. Local-area networks, sufficient telephone connections, and high-speed wide-area network access are often absent.

As ICS participants come to responses with their own Internet-capable computers and familiarity with "web browsing," it is apparent that barriers preventing widespread access to a response information database can be overcome by providing access via a Web browser.

The SpillWeb Solution

NOAA's Hazardous Materials Response Division is developing the SpillWeb Information Network to help expedite spill response information access. SpillWeb consists of a wireless local-area network that allows mixed computer operating systems to communicate using standard Internet methods. The local network relies on high-bandwidth, wireless connectivity to allow rapid assembly of easily modified networks operating among clusters of buildings. This design allows any user with a computer and an Internet browser to walk into a command post and immediately acquire information from the network. The local network provides remote dial-in access and allows controlled external information dissemination.

SpillWeb integrates a modern, Internet-based information network into the widely used ICS structure, allowing maximum flexibility in collecting and disseminating information. The application backbone is a Web-enabled relational database implementation of ICS forms. The forms conform to the ICS forms developed by the Standard Oil Spill Response Management System (STORMS) Task Force as published in their Field Operations Guide. NOAA

participated in the STORMS Task Force and developed the first electronic ICS forms. SpillWeb is not limited to ICS forms. It can also publish additional spill response information such as oil spill trajectories, spill photographs, tide predictions, and oil weathering graphs.

SpillWeb hardware includes an Internet server, wireless Ethernet network, six network workstations, network nodes for an additional 5 computers, two printers, a video projector, and remote dial-in access via modem. The network configuration can be expanded as appropriate, with both hardware and software security.

Frequently Asked SpillWeb Questions

Does it work?
Yes. SpillWeb has been field tested at the 1997 Spill of National Significance exercise in Philadelphia, a major industry-government exercise in New York, and at a PREP exercise in New Orleans.

What equipment is necessary to access SpillWeb?
In the command post, any computer with Internet access software such as Internet Explorer or Netscape Navigator and a local area network connection. Outside the command post, any computer with Internet Explorer or Netscape Navigator and the ability to connect to the Internet via modem.

Where does SpillWeb fit within the ICS organization?
The information management functions of SpillWeb usually reside within the Situation Unit of the Planning Section.

Who has control over information in SpillWeb?
The Unified Command, specifically the Situation Unit Leader, controls access to and dissemination of information entered into SpillWeb. NOAA administers the SpillWeb under the direction of the Unified Command.

Does SpillWeb use a relational database?
SpillWeb is built using relational database software. The database design makes use of a relational database model where appropriate.

Can SpillWeb share data with other spill management systems?
Yes, through exchange of standard text files. NOAA has published an ICS forms data dictionary to encourage exchange of information among database systems.

Can SpillWeb connect to my existing Local Area Network?
SpillWeb can serve as a wireless extension to existing Ethernet networks. Working with your systems administrator, SpillWeb can be configured as a seamless extension of an existing network or as a separate, secure system.

How do I get SpillWeb?
Contact your local NOAA Scientific Support Coordinator (SSC) to request SpillWeb for a spill or spill exercise. The SSC can arrange for SpillWeb equipment and support personnel. NOAA will also share the technology and data underlying SpillWeb with other organizations. You can get technical specifications via electronic mail at: spillweb@hazmat.noaa.gov. Get more information about NOAA's spill program at: http://response.restoration.noaa.gov